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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,143	12/04/2003	Gary A. Frazier	004578.1370	1346
45507	7590	07/25/2005		
BAKER BOTTS LLP 2001 ROSS AVENUE 6TH FLOOR DALLAS, TX 75201			EXAMINER CHEN, SHIH CHAO	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/729,143

Applicant(s)

FRAZIER, GARY A.

Examiner

Shih-Chao Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on March 16, 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 16, 17, 20, 25, 26, 29-31 and 34 is/are rejected.
- 7) ☒ Claim(s) 4-15, 18, 19, 21-24, 27, 28, 32, 33, 35 and 36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/4/03 & 3/16/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 20, 29-31 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Osterman (U.S. Patent No. 6,292,140).

Regarding claim 1, Osterman teaches in figures 1-8 an apparatus comprising an integrated circuit [49] having a section which includes: a resonator portion [44] responsive to electromagnetic radiation within a first frequency range; a converter portion [46] coupled to the resonator portion, and responsive to radiation received by the resonator portion within the first frequency range for emitting electromagnetic radiation within a second frequency range (i.e. IR radiation) substantially different from the first frequency range; and a detector portion [47] responsive to radiation within the second frequency range and disposed in the region of the converter portion, the detector portion detecting radiation emitted by the converter portion within the second frequency range.

Regarding claim 2, Osterman teaches in figures 1-8 an apparatus according to Claim 1, wherein the second frequency range includes infrared radiation, and the radiation emitted by the converter portion [46] is infrared radiation.

Regarding claim 3, Osterman teaches in figures 1-8 an apparatus according to Claim 2, wherein the first frequency range includes radiation which is substantially lower in frequency than infrared radiation.

Regarding claim 20, Osterman teaches in figures 1-8 an apparatus comprising: a resonator portion [44] responsive to electromagnetic radiation within a selected frequency range (i.e. millimeter wave) which is substantially different from a frequency range of infrared radiation; a converter portion [46] coupled to the resonator portion, and responsive to radiation received by the resonator portion within the selected frequency range for emitting infrared radiation; and a detector portion [47] responsive to infrared radiation and which is disposed in the region of the converter portion, the detector portion detecting infrared radiation emitted by the converter portion.

Regarding method claims 29-31 and 34, the apparatus discussed above would perform the claimed method.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 16-17 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osterman (Cited above).

Osterman discloses the claimed invention except for the further resonator; the further converter portion; and the further detector portion. It would have been obvious to

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one having ordinary skill in the art at the time the invention was made to duplication of parts, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art.

Allowable Subject Matter

5. Claims 4-15, 18-19, 21-24, 27-28, 32-33 and 35-36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-Chao Chen whose telephone number is (571) 272-1819. The examiner can normally be reached on Monday-Friday from 7 AM to 4:30 PM, First Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shih-Chao Chen
Primary Examiner
Art Unit 2821

Shih-Chao Chen
SHIH-CHAO CHEN
PRIMARY EXAMINER

SXC
July 18, 2005